What is claimed is:

1. Apparatus for removing materials from a gas stream, comprising:

a) a reservoir for liquid,

b) an inlet channel in fluid communication with the reservoir,

c) a perforated sheet located above the reservoir, wherein the perforated sheet defines an outlet area located above the sheet, and

d) a liquid transfer channel, the liquid transfer channel defining a fluid path between the reservoir and said outlet area,

wherein a pressure difference between the outlet area and the inlet channel comprises a sole means for moving liquid from the reservoir into the outlet area.

2. The apparatus of Claim 1, wherein the apparatus has no pump for conveying liquid.

3. The apparatus of Claim 1, further comprising a blower for conveying gas through the apparatus.

4. The apparatus of Claim 3, wherein the blower is configured to push gas into the inlet channel and into the reservoir.

5. The apparatus of Claim 3, wherein the blower is configured to pull gas out of the outlet area.

6. The apparatus of Claim 1, wherein the inlet channel includes an inlet ramp which constricts the inlet channel.

7. The apparatus of Claim 6, wherein the inlet ramp defines a point of maximum constriction, and wherein the perforated sheet extends to said point of maximum constriction.

8. The apparatus of Claim 1, further comprising a plurality of wave breaks located within the reservoir, and under the perforated sheet.

9. The apparatus of Claim 8, further comprising a plurality of wave

breaks located above the perforated sheet.

10. The apparatus of Claim 1, further comprising a sludge ramp located within the reservoir, the sludge ramp comprising means for directing sludge to a collection point.

11. The apparatus of Claim 1, further comprising an outlet opening, and a silencer baffle located below the outlet opening.

12. Apparatus for removing materials from a gas stream, comprising:

a) a reservoir for liquid,

b) a perforated sheet located above the reservoir,

c) a liquid transfer channel, the liquid transfer channel defining a fluid path between the reservoir and an outlet area located above the perforated sheet, and

d) means for conveying a gas towards the reservoir and through the perforated sheet,

wherein a pressure difference between areas above and below the perforated sheet comprises a sole means for moving liquid from the reservoir into a region above the perforated sheet.

13. Apparatus for removing materials from a gas stream, comprising:

a) a housing defining an inlet channel and a reservoir, the inlet channel being in fluid communication with the reservoir,

b) a perforated sheet located above the reservoir,

c) a liquid transfer channel for providing a path for liquid between the reservoir and an area above the perforated sheet,

d) a plurality of wave breaks positioned above and below the perforated sheet, and

e) a fan for moving gas from the inlet channel towards the area above the perforated sheet.

14. The apparatus of Claim 13, wherein a pressure difference between

regions on opposite sides of the perforated sheet comprises a sole means for moving liquid from the reservoir to an area above the sheet.

15. The apparatus of Claim 14, further comprising a sludge ramp located within the reservoir, the sludge ramp comprising means for directing sludge to a collection point.

16. The apparatus of Claim 14, further comprising an outlet opening, and a silencer baffle located below the outlet opening.

17. A method of removing materials from a gas stream, comprising conveying a gas stream containing materials to be removed into a reservoir containing a liquid, the reservoir being located below a perforated sheet, the reservoir being in fluid communication with an area above the perforated sheet through a liquid transfer channel that is narrower than the reservoir, wherein the gas stream is conveyed at a rate such that a pressure drop induced by flow of gas through the perforated sheet is sufficient to cause liquid to rise from the reservoir and to cover the perforated sheet.

18. The method of Claim 17, wherein liquid is conveyed through the liquid transfer channel without assistance from a pump.

19. A method of scrubbing a gas, comprising directing gas to be scrubbed through a perforated sheet located above a reservoir containing a liquid, wherein the reservoir is in fluid communication with an area above the sheet through a liquid transfer channel, wherein the gas is directed through the sheet at a rate sufficient to induce a pressure drop across the sheet sufficient to cause liquid from the reservoir to flow through the liquid transfer channel and to flood the sheet.

20. The method of Claim 19, wherein liquid flows through the liquid transfer channel without assistance from a pump.